
2.0 Purpose and Need

This study was undertaken to address a number of interrelated issues that have the potential to adversely affect the US 14/61/WIS 35 corridor in the future. The need to develop a long-term vision for the urban segment, and identify programmatic and timing for the rural segments stem from:

- Increasing Traffic Congestion
- Safety Concerns
- Facility Deficiencies
- Insufficient Multi-modal Accommodations
- Changing Land Use/Transportation Needs

Ultimately, the needs are addressed in this report through a range of alternatives that were developed to enhance the function, efficiency, and safety of the US 14/61/WIS 35 segments and intersections well into the future. Needs for the two rural segments of the study area are also addressed via recommendations for timing improvements.

This report was developed for a diverse audience. It is anticipated that this report will aid in the transportation decision-making process for selecting long-term solutions to address the needs listed above. The report can be used as a centralized reference with individual sections acting as stand alone documentation that will help with future decisions on the corridor.

2.1 Increasing Traffic Congestion

Over the nine year period between 1993 and 2002, traffic volumes on the urbanized corridor increased between 11 and 51 percent with an average increase of 23 percent. The increase in traffic over the same period on the rural segments of the corridor was 22 percent for WIS 35 and 28 percent for US 14/61. The most recent traffic count data, reported as Average Annual Daily Traffic (AADT), ranged from 17,100 to 25,500 in 2002 and is projected to increase to a range of 23,800 to 35,800 by 2030 for the urban segment of the corridor. Traffic volumes for the rural segments of the corridor were 10,600 AADT for WIS 35 and 9,600 AADT for US 14/61 in 2002 and are projected to reach 16,200 for WIS 35 and 12,400 for US 14/61 by year 2030.

The increase in traffic within the study area is expected to influence the capacity and intersection operations of the South Avenue/Mormon Coulee Road (urban segment) corridor. Table 1, Traffic and Congestion – Urban Segment below depicts those areas of the corridor that are most likely to experience lower capacity and operations between now and the future.

Table 1 – Traffic and Congestion – Urban Segment

Segment	Year					
	2002	2004	2007	2017	2027	2030
33 rd Street – Shelby Road	20,400	21,000	21,900	24,900	27,900	28,800
Shelby Road – Birch Street	22,100	22,800	23,900	27,400	31,000	32,100
Birch Street – Losey Boulevard	24,200	26,000	28,700	31,900	34,900	35,800
Losey Boulevard – Victory Street	22,800	23,000	23,300	26,300	29,100	29,900
Ward/East Avenue – 16 th Street	24,900	25,500	26,500	28,500	30,400	31,000
16 th Street – Weston/West Avenue	25,000	25,500	26,300	28,500	30,400	31,000
Weston/West Avenue – Green Bay Street	16,700	17,200	18,000	20,500	23,000	23,800
Green Bay Street – (north)	17,200	17,800	18,700	19,900	21,100	21,500

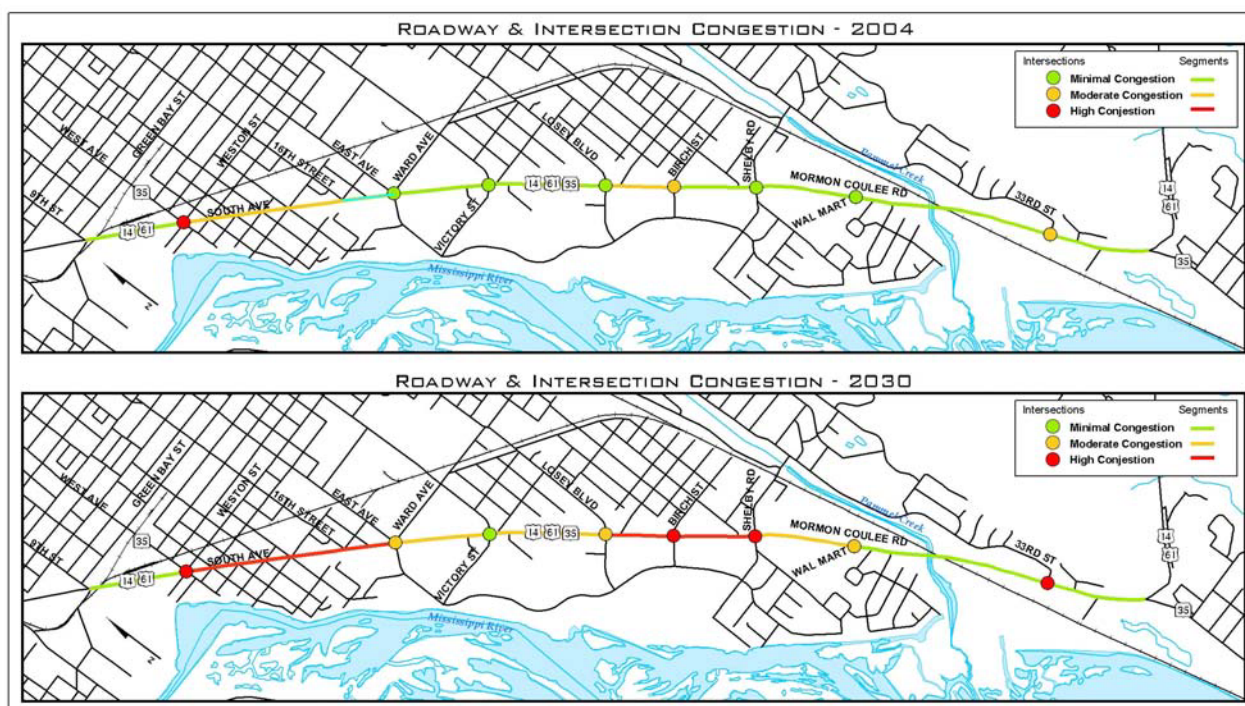
**Light Grey 75% of WisDOT FDM threshold traffic for a four-lane facility*

**Dark Grey 85% of WisDOT FDM threshold traffic for a four-lane facility*

In the table above, all of the shaded cells represent preliminary estimates for those corridor segments that could experience congestion between 2007 and 2030. The light shaded cells reflect the point at which traffic exceeds 75 percent of the WisDOT threshold for a four-lane urban facility. The darker shaded cells reflect the point at which the traffic approaches 85 percent of the threshold. The current WisDOT threshold to consider capacity improvements for a four-lane facility is 36,000 AADT. The table indicates a majority of segments in the urban corridor are expected to experience some capacity related delay and operational issues by 2030. See Section 8.0, Traffic Analysis for a detailed discussion of capacity and operations on the urban segment.

In addition to mainline capacity, intersection capacity/operations were also examined to determine their long-term function. Intersections are represented in Figure 3, Current and Future Congestion – Urban Segment as circles. Segments are also included in the figure. As congestion is anticipated to increase, the colors in the figure change from green to red. As can be seen in the figure, intersections in the center of the urban segment are beginning to experience traffic related operational/capacity issues. It is anticipated that the function of these intersections would continue to decline in the future.

Figure 3 – Current and Future Congestion – Urban Segment



2.2 Safety Concerns

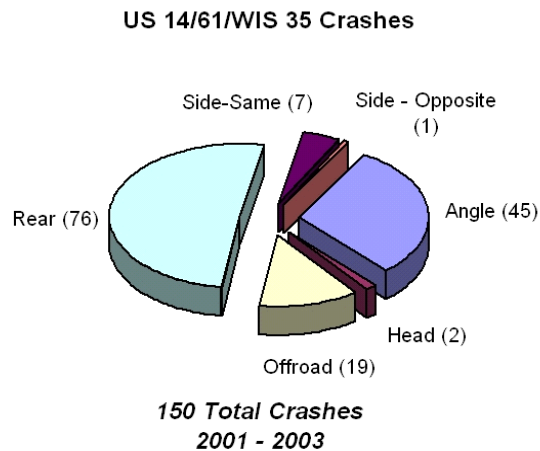
An analysis of crashes occurring on the urban segment (South Avenue/Mormon Coulee Road) was conducted for the years 2001 to 2003. Both a mainline segment and an intersection crash analysis were conducted. A three-year crash analysis was conducted for the study. The results of the three-year crash analysis are included within this report. A five-year crash analysis was also completed near the end of the study and is included in Appendix G, Urban Segment Five-year Crash Analysis. WisDOT should continue to monitor the traffic and crashes on the urban segment to determine if traffic patterns are changing and if future analysis is needed.

For roadway segments, a crash rate is calculated for comparison to other similar facilities across the state. A segment crash rate is reported as the number of crashes occurring for every 100 million vehicle miles (MVM) traveled on the segment. On average, the South Avenue/Mormon Coulee Road corridor has experienced fewer crashes between 2001 and 2003 than other similar urban highway corridors in Wisconsin. The overall crash rate for South Avenue/Mormon Coulee Road was 173 per 100 MVM for the period between 2001 and 2003, whereas, the statewide average was 270 over the same period.

The types of crashes occurring on the urban segment (Segment A) are also typical of urban corridors (see Figure 4, Crash Types – Urban Segment). However, the short four-lane segment of South Avenue/Mormon Coulee Road between Ward Avenue and West Avenue is well above the state average for crashes and crash severity. The crash rate for this segment between 2001 and 2003 was 285 per 100 MVM. The number of crashes

resulting in injury was also above the statewide average of 93 per 100 MVM, with a rate of 126 per 100 MVM.

Figure 4 – Crash Types – Urban Segment



Intersection crashes occurring along Segment A are well below the threshold and severity to consider intersection improvements or further study. Intersection crash rates are calculated to account for the amount of traffic entering the intersection. Intersection crash rates are reported as the number of crashes occurring for every one million vehicles entering the intersection. The crash rates for intersections along South Avenue/Mormon Coulee Road ranged between 0.08 and 0.37 per million entering vehicles. Wisconsin considers further study warranted when a crash rate meets 1.5, and intersection improvements likely needed when the crash rate exceeds 2.0 per million entering vehicles.

2.3 Facility Deficiencies

Facility deficiencies occur as policy, standards, and technology change between roadway improvement projects over time. A number of deficiencies exist on the urban segment as a result of incremental changes to the corridor. Deficiencies present include:

- Obstructions such as light poles and other objects within the clear zone (area within two feet of the face of curb for portions of the corridor).
- Narrow lane width for a US long truck route.
- Skewed and multi-leg intersections.

A comprehensive deficiency analysis was completed for Segment A (see Section 7.0, Analysis of Geometric Deficiencies).

2.4 Insufficient Multi-modal Accommodations

Alternative travel options to the motor vehicle include bike, pedestrian, and transit on the urban segment. Within Segment A, the four-lane undivided portion of South Avenue between Ward Avenue and West Avenue includes the most opportunities to improve pedestrian accommodations. In this portion of Segment A, US 14/61/WIS 35 intersects the pre-existing street



grid network at skewed angles. The resulting five- and six-leg intersections create long crossing distances for pedestrians. In addition, these intersections include numerous sidewalk curb ramps that act as additional barriers for disabled pedestrians. The width of South Avenue/Mormon Coulee Road corridor poses challenges for pedestrians crossing at intersections farther south of this segment as well.

Transit service is currently unavailable south of 33rd Street limiting opportunities for other travel modes into the city of La Crosse from the rural segments. In addition some transit stops are not served by the sidewalk system or are not situated for convenient pedestrian travel between the stop and local destinations.

On WIS 35 south of the US 14/61/WIS 35 intersection (Segment B), wide shoulders accommodate travel by bike. Pedestrian travel could occur along the shoulders as well, however long distances between destinations coupled with high traffic volumes make this alternative less feasible.

Bike travel on US 14/61 (Segment C) is limited to the most skilled users due to the current geometry, vehicle speeds, and traffic volume handled by the corridor.

2.5 Changing Land Use/Transportation Needs

The urban corridor is experiencing a number of changes in the type of land use activities that are occurring. Historically, the corridor has had a strong presence of motel, hotel, and other travel oriented land uses. These land uses have been transitioning to other uses such as large- and mid-scale retail development, an increase in senior housing, and other specialty and retail commercial activities.

Alternative transportation modes may become more important along the corridor as the driving demographic residing in the vicinity of South Avenue/Mormon Coulee Road changes. The long-term vision for the urban segment would need to consider anticipated changes in urban development patterns. Current transportation needs could change if the land use activities continue to follow the current trends toward assisted living units and senior housing.

Rural segments of the study area have been experiencing residential and suburban type growth primarily along US 14/61. Commercial land uses are beginning to find developable land along the US 14/61 highway corridor as agricultural and other lands become available, and as increased residential development requires additional services. Bike and pedestrian accommodations are anticipated to become more important as a result of continued residential growth and the local desire to provide such amenities as bike/pedestrian trails and routes.

Environmental constraints and the scenic designation of WIS 35 have limited development along that corridor.

3.0 Environmental Scan

Appendix A, Environmental Scan provides broad documentation of the built and natural environmental conditions that are found within the project study area (one-half mile on either side of the three roadway segments). The Environmental Scan is organized to correspond with many of the subject areas that are required by the National Environmental Policy Act (NEPA) environmental review process. The Environmental Scan is not intended to act as a substitute for or preclude formal environmental documentation, nor is it intended to be a complete analysis of all potential environmental issues and resources in the area that could be affected by future improvements. It is anticipated that any future improvements along the corridor would likely require necessary and comprehensive environmental documentation prior to implementation.